SPRING 2002

SAVANNAH RIVER SITE CITIZENA ADVISORY BOARD

Board Beat

SRS proposes initiatives for accelerated cleanup dollars

SRS officials met with stakeholders on February 26, 2002, to discuss the FY03 budget and nine specific initiatives or ideas for proposals for funding from a proposed expedited cleanup account. In early February, Secretary of Energy Spencer Abraham announced that the President's Budget for FY2003 proposed the creation of a special "expedited cleanup account." He directed his staff to immediately begin discussions with stakeholders, communities, regulators, state and local elected officials, and Members of Congress, to discuss appropriate ways to refocus DOE efforts and resources to accomplish cleanup reform.

SRS officials met with approximately 50 stakeholders during an SRS Citizens Advisory Board meeting to discuss site initiatives. Three working sessions were held in the afternoon for stakeholders to provide input to site proposals to be developed. Although the meeting generated dozens of questions about the Cleanup Reform Appropriation and FY03 base budget funding, stakeholders focused their input on the following SRS proposals:

Accelerate mission completion and minimize footprint

- Consolidate spent nuclear fuel (SNF) storage facilities by accelerating a three-to-one basin strategy for completion from FY06 to FY04. Spent fuel in the K Basin and the Receiving Basin of Offsite Fuels would be consolidated in the L Basin.
- Minimize the footprint of ongoing process facilities by accelerating closure of the F Canyon. SRS F Area legacy materials consolidation would be accelerated from FY08 to FY05 and F Area Separations Facility Deactivation would be accelerated from FY12 to FY07.

Invest in current capabilities and support complex-wide special nuclear materials consolidation

- Optimize spent nuclear fuel storage to support integrated risk-based disposition by maintaining a single basin storage capacity and establishing an integrated SNF disposition process.
- Invest in targeted facilities to support disposition of SRS materials particularly plutonium packaging, characterization, surveillance and final disposition and SNF disposition.
- Enhance capability to support storage and disposition of complex-wide materials such as the K Area Materials Storage Facility and utilization of H Canyon.

Expedite high level sludge and salt processing

- Expedite schedule by ten years. Immediately classify forty percent of High Level Waste (HLW) Tanks as a closure facility with tailored requirements. Increase Defense Waste Processing Facility canister production and increase canister load. Expedite salt processing by segregating salt waste streams and applying appropriate disposal methods to each stream.

(Continued on page 2)

Inside this issue:

Special points of interest:

- *Environmental Management Top-to-Bottom Review*
- *SRS hosts national workshop*
- *DNFSB talks to the CAB*
- *CIF decision made*

SRS proposes initiatives...

(Continued from page 1)

Expedite tank and processing facility closure

- Work with regulators to schedule final tank closure actions and determine if alternate methods are appropriate. Simplify decontamination and decommissioning plans for processing facilities to recognize that the site will not be turned back to a greenfield.

Accelerated closure of the Old Radioactive Waste Burial Ground

- Accelerate closure of five higher risk waste sites as a single action by consolidating contaminated soil from four waste sites in the Old Radioactive Waste Burial Ground (ORWBG) and then constructing a final closure cover for each of the excavated sites. The excavated materials would establish the final grade for the closure of the ORWBG and a low permeability closure cap would be constructed over the ORWBG.

Accelerated contaminant reduction in Fourmile Branch stream

- Replace the current pump-and-treat system. Raise the aquifer pH and immobilize metals to stop migration to the stream with base injection, and utilize phytoremediation with spray irrigation to reduce aquifer recharge through evapo-transpiration accelerating stream cleanup by three years.

Accelerated risk reduction through innovative technologies and improved regulatory processes

- Accelerate risk reduction and reduce life cycle cost for priority cleanup projects using innovative technologies and a streamlined regulatory process. Capitalize on an established Core Team approach with regulators that supports the deployment of leading edge technologies.

Accelerate risk reduction through expediting Transuranic (TRU) waste shipments to WIPP

- Add assay capability for Pu-238 and 239 waste and add capability to remove prohibited items and repackage to enhance characterization and process facilities. Sixty shipments are needed to accelerate elimination of TRU waste by 2024. Existing limits on the TRUPACT-II containers are restrictive and enhanced payload capability is needed.

Cost effective/risk reducing alternative to incineration of Plutonium Uranium Extraction (PUREX) waste

- Provide a stabilization treatment facility for PUREX wastes as an alternative to incineration.

SRS CAB follows EM Top-to-Bottom Review

A year ago, Department of Energy Secretary Spencer Abraham directed the department to conduct a sweeping review of its Environmental Management (EM) programs and activities with the ultimate goal of a "stronger, more effective and efficient environmental management program." A Top-to-Bottom Review Team was formed in August 2001 to review the EM program management systems, with the goal of quickly and markedly improving program performance. SRS officials communicated with stakeholders their emphasis on the assessment when the SRS Citizens Advisory Board met in November in Charleston, S.C. At that time, DOE-SR Manager Greg Rudy provided an overview of SRS assessment activities and discussed re-energized efforts to identify ways to reduce the cost and schedule for the EM program.

In February, a full-day meeting was dedicated to the Top-to-Bottom Review and the SRS initiatives being proposed under the new Cleanup Reform Appropriation, an $800+ million account to be established for DOE facilities to accelerate risk reduction within the complex. Approximately 50 interested citizens received a presentation from DOE Headquarters Top-to-Bottom Review Team Member Bill Levitan regarding the results of the year-long effort. The team found that the manner in which EM develops, solicits, selects and manages many of its contracts is not focused on accelerating risk reduction or applying innovative approaches to doing the work. Nor is EM's cleanup strategy based on comprehensive, coherent, technically supported risk prioritization. Internal business processes are not structured to support accelerated risk reduction or to address its current challenge of uncontrolled cost and schedule growth. The team recommended improvements in DOE's contract management and that DOE adopt agreements with regulators for accelerated, risk-based cleanup strategy. They also recommended that DOE align and revamp internal processes and re-deploy, streamline or cease activities not consistent with the cleanup and closure mission.

(Continued on page 6)

Numerous comments were provided during the three working sessions and all participants gathered at the end of the day to present session outcomes and determine combined comments to DOE for consideration in proposal development. A copy of the public comments can be obtained by calling 1-800-249-8155 or viewed at the CAB's website at www.srs.gov and click on Outreach Programs.

The SRS CAB applauded Greg Rudy, DOE-SR manager for his decision to involve stakeholders in the early development of the proposals. However, stakeholder feedback regarding the FY03 budget and Cleanup Reform Appropriation has been mixed. Stakeholders agree with the concept that the highest risks should be addressed first,

(Continued on page 3)

Recent Recommendations Highlighted

Operating Strategy Studies for the Solid Waste System Plan
The SRS CAB recommended that SRS prepare additional operating strategy and cost studies regarding long-term disposal of non-compacted waste and specifically requested that the site:

- Investigate alternatives to the B-25 disposal containers, which includes the possibility of direct shallow-land burial of appropriate low activity, low level wastes.
- Investigate alternatives to reduce subsidence repair costs.
- Evaluate alternative capping strategies.
- Evaluate alternatives to optimize land utilization.
- Provide the long-term public health and environmental impacts for each strategy.

Scrap Metals Programmatic Environmental Impact Statement (PEIS)
The SRS CAB offered the following recommendations to help DOE determine the alternatives, issues and environmental impacts to be analyzed by the Scrap Metals PEIS:

- Convey to the general public the various alternatives in language that is clear and easy to understand.
- Include the expected inventory of all scrap metal and the financial impacts of implementing each alternative including disposal cost, expected income from recycling, costs for detection methodology, processing costs, record maintenance, etc.
- Identify the industry/government standard it would consider using in Alternative # 2. Provide a rationale for choosing that standard realizing that a zero level of radioactivity can never be achieved.
- Address the anticipated public involvement and communications program in the PEIS.
- Identify the short-term health effects to site workers, off-site workers, and the general public for each alternative under consideration.
- Identify the long-term (10,000 years) health and environmental impacts of metal compounds expected from the degradation of scrap metal exposed to the elements and potential landfill leachate.

Groundwater Mixing Zones
The SRS CAB applauds the regulatory agencies (SCDHEC & EPA) and SRS in the prudent use of groundwater modeling technology and vadose zone containment migration software and requested that the three agencies finalize a streamlined protocol, analogous to the Plug-In Record of Decision (ROD) concept, on mixing zone applications. They asked the three agencies to provide a plan of action and milestones for the protocol for presentation to the CAB by January 2002. The Board also requested that the three agencies continue to solicit stakeholder input (SRS CAB and the public) during the initial phases of remedy selection on any restoration site.

PUREX Recovery Alternatives
The Board recommended that a cost benefit analysis to select the optimum treatment/disposal route for canyon PUREX solvent be prepared and presented to the SRS CAB by April 23, 2002.

Parallel Salt Disposition Strategy
A recommendation was adopted which re-confirmed the SRS CAB position that the FFA closure schedule must be met, including start up of a full scale salt processing facility by 2010 and the closures of HLW tanks as scheduled. It asked for funding needs, permit and regulatory requirements and a synopsis of the technical plan to resolve questions about the low curie saltcake strategy.

Low Activity TRU Facility
The Board recommended that SRS proceed with the planned modifications for the Low Activity TRU Facility and provide a status update on regulatory permits and progress. It also asked that DOE identify any potential cost savings, technology enhancements, or management modifications, which could potentially speedup the disposition of SRS TRU wastes.

Stakeholder Input to SRS Budget Process
The Board recommended that no later than April 19, 2002, SRS develop and submit to the CAB a schedule for annual stakeholder involvement in the budget process. The schedule should include specific dates for submission of information to the CAB and establish specific dates for CAB inputs throughout all phases of the budget process.

SRS proposes initiatives...

(Continued from page 2)
however opinions differ regarding what are the higher risk priorities. Also, many questions remain unanswered regarding the expedited account. Does Congress support the Cleanup Reform Appropriation? Are long-term strategies implementable? Will the regulators buy-in to site initiatives? Will competing for funds put some communities at risk

Although no formal recommendations have been provided, the SRS Citizens Advisory Board will continue to follow the progress of the SRS proposals and the FY03 budget including the expedited cleanup account. Board committees have received updates regarding consideration of stakeholder input into the proposals. The SRS proposals were shared with Assistant Secretary Jessie Roberson during a visit the last week of March. A Letter of Intent regarding expected funding from the expedited account is anticipated by May, 2002.

SR CAB approves Work Plan for 2002

The Citizens Advisory Board approved the latest Annual Work Plan at a working meeting held in conjunction with their January 2002 Board meeting in Hilton Head Island, SC. The Plan is based on input provided by Committee members prior to the January Board meeting and was further refined by the Chairs of the individual Committees prior to approval of the full Board.

The purpose of the Work Plan is to establish priority issues for each of the Committees, and therefore the CAB. It allows all Board Members to be involved in setting the direction of the CAB, prioritizing resource expenditures (people and dollars), and controlling the activities of focus and working groups.

The Work Plan contains sections for each of the four issues-based Committees of the CAB: Strategic and Long Term Issues, Waste Management, Environmental Restoration and Nuclear Materials.

Committee chairs structure their activities to focus on the issues identified in the Work Plan. Since new issues may come up during the year, deviating from the Work Plan is at the discretion of the Committee Chairs - however, they typically inform the CAB when this is required.

Priority issues identified by the CAB in this latest version of the Work Plan include long-term stewardship, high level waste tank issues, the EM Top-to-Bottom Review and plutonium shipments to SRS. The Work Plan is reviewed and updated annually and can be viewed on the CAB website.

Newly elected SRS CAB Waste Management Chair Bill Willoughby (right) and Vice Chair Gerald Devitt (center) visit waste Management facilities at SRS with Kevin Buchanan (left), DOE

Focus on Technology

Enhanced Bioremediation Using the Microenfractionator ™

Early in situ approaches to bioremediation, a soil cleanup technology, consisted of merely tilling or spreading appropriate nutrients into the soil. This remedial approach was inconsistent due to the vagaries of the climate (rainfall, temperature), and the quality control in the application methods. In addition, the required length of time for such bioremediation efforts made regulatory acceptance problematic. Until recently, bioremediation has been generally limited to applications involving organic compounds (such as petroleum hydrocarbons) that can be easily decomposed biologically. Recent advances in the understanding of bioremediation mechanisms have resulted in better field application methods, which in turn have improved quality control and extended the range of application to degradation of chlorinated hydrocarbon compounds. These improvements are based on more consistent mixing technologies as well as better control of nutrient composition, soil pH, temperature, redox potential, and moisture content.

Enhanced bioremediation using the Microenfractionator™ has been used successfully to treat soils contaminated with other pesticides (metalochlor, atrazine, chlordane, heptachlor, 2,4-D, and 2,4,5-T) and nitrated organic compounds (trinitrotoluene, dinitrotoluene, and RDX).

Aggressive soil preparation is the role of the Microenfractionator™ technology. The Microenfractionator™ is a large piece of equipment similar to those used in municipal composting. It is designed to work on soil that is configured in long piles called "windrows." The Microenfractionator™ was developed to improve soil remediation technologies. This equipment generates dynamic counter-rotating air vortices, thoroughly mixing the soil, contaminants, chemicals, catalysts or other amendments and air for maximum mass transfer.

The Microenfractionator™ is designed with a counter-rotating drum supporting a set of fan-knife blades. The drum is powered hydrostatically by a diesel engine and is driven through the soil pile by self-propelled, four-wheel drive power. The fan-knife blade design causes soil particles to be thrown sideways into each other and against the stainless steel lining of the microenfractionation chamber at high velocities. This physical action causes the particles to fracture into microscopic sizes, exposing more contaminant surface area for treatment.

The machine eliminates hot spots of contamination within the soil matrix, which can inhibit biological remediation, while providing up to 95% homogeneity. The mixing action of the machine simultaneously homogenizes the soil and mixes in the amendments.

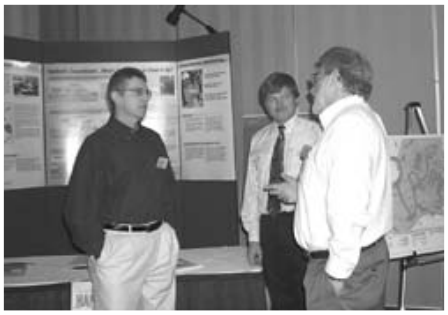
SRS CAB hosts National Groundwater Workshop

Every year or so, several board members from nine DOE Site Specific Advisory Boards (SSAB) get together to discuss common issues of concern. The Savannah River Site Citizens Advisory Board hosted a national SSAB Groundwater Workshop at the Sheraton Augusta Hotel on February 1-2, 2002. The workshop was preceded by a tour of the Savannah River Site and a reception on January 31, 2002.

Approximately 100 participants representing the nine SSAB's, the Department of Energy, regulators and other stakeholders attended the workshop, which was the fifth workshop in the series. Previous workshops covered low-level waste, transportation and long-term stewardship.

The purpose of the workshop was to improve stakeholder understanding of groundwater cleanup and technology issues; to foster dialog among SSABs about common groundwater issues and concerns; and to provide joint recommendations toward resolution of those concerns. The workshop began with a day-long tour of SRS. Participants learned about eleven known areas of groundwater contamination that resulted from former waste disposal practices. Eight groundwater remediation systems are operating, treating over four billion gallons of water. Innovative cleanup technologies featured on the tour included dynamic underground stripping, bioremediation and phytoremediation.

The next day and a half were spent hearing presentations, visiting displays and engaging in discussions to learn more about groundwater contamination issues across the complex. DOE has identified 176 groundwater contamination plumes at its facilities that are being addressed at a cost of $78 million per year. Participants worked together to develop statements that identified issues of importance to stakeholders to help guide the Department of Energy and its regulators as they consider groundwater-related decisions. Statements were developed in four topical areas: Technology, Regulations, Public/Community Involvement and Stewardship. These statements will be reviewed by the Chairs of all of the SSABs at their semi-annual meeting in April, and if approved, will be formally transmitted to senior managers at the Department of Energy for their consideration.



For additional information about the Groundwater Workshop contact Dawn Haygood at 800-249-8155 or Mike Schoener at 803-641-8166 or check the web at www.srs.gov and click on Outreach Programs

Experts in nuclear safety monitor progress of material stabilization activities

On March 14 and March 26, the SRS Citizens Advisory Board (CAB) Nuclear Materials (NM) Committee received updates from the Defense Nuclear Facilities Safety Board (DNFSB) on Savannah River Site NM Stabilization Activities. Todd Davis and Dr. Tom Burns are the two DNFSB staff members assigned as site representatives to SRS.

In the late 1980's, Congress recognized that significant public health and safety issues had accumulated at many of the aging facilities in the DOE complex. As an outgrowth of these concerns, Congress created the DNFSB in 1988 as an independent oversight charged with providing advice and recommendations to the Secretary of Energy "to ensure adequate protection of public health and safety" at DOE's defense nuclear facilities.

DNFSB concerns in regards to material stabilization activities throughout the DOE Complex including SRS, resulted in the issuing of Recommendation 1994-1. It stated "The halt in production of nuclear weapons and materials to be used in nuclear weapons froze the manufacturing pipeline in a state that for safety reasons, should not be allowed to persist unremediated." When the DNFSB felt adequate progress had not been made, they issued Recommendation 2000-1 which states "...the progress being made of the stabilization activities addressed by Recommendation 94-1 does not reflect the urgency that the circumstances merit and that was central to the Board's recommendation".

During the presentation to the CAB, Todd Davis acknowledged that while the DNFSB has been critical of past delays in material stabilization activities, he believes there has been significant progress made since 1994. The DNFSB, at least conceptually, is in agreement with the proposed SRS implementation plan for stabilization activities, which is in revision. He said the DNFSB is watching with interest several key projects.

The DNFSB has concerns about plans for long-term chemical separations activities. At the current time, F-Canyon suspension plans are ongoing. The DNFSB has communicated to DOE that having both H and F-Canyons available is still appropriate and would provide flexibility and a means to achieve stabilization goals sooner with a proven methodology. According to Davis, there continues to be some surplus material identified in the DOE complex and F-Canyon could be a viable option for disposition. DOE has been given 60 days to respond to the March 21, 2002 letter from the Chairman of the DNFSB.

(Continued on page 7)

New members in the Spotlight

Judy Barnett
Judy resides in Jackson, SC, a small community that borders the Savannah River Site. She is concerned about the environment, drinking water and air. She represents the general public category.

Ann Shaw Dalton
A former high school teacher, Ann majored in Business Administration and taught business subjects. Ann is a member of the National Parks Conservation Association, the Nature Conservancy, and the National Trust for Historic Preservation.

Dorene Richardson
A local restaurant owner and SRS employee, Dorene holds an associate degree in Nuclear Engineering Technology. She has also obtained several certificates regarding hazardous waste management.

Gloria Williams-Way
Gloria is an Associate Professor and Coordinator of History at Paine College, a historically black college in Augusta, Georgia. She holds a Doctor of Philosophy, Master of Arts and Bachelor of Science from various universities. She has been an educator since 1982 and is very involved in numerous historical associations.

SRS CAB follows EM review...

(Continued from page 2)

On March 26, Assistant Secretary Jessie Roberson met with the SRS CAB to discuss her commitment to the Top-to-Bottom Review and cleanup reform. She had just begun a week-long visit at SRS to review the site's proposals for funding under DOE's new expedited cleanup account (see related article). Ms. Roberson described the Top-to-Bottom Review as a framework for a path forward to focus on accelerated cleanup that was not intended to criticize, but is a critical self assessment of a ten-year program. Ms. Roberson portrayed a new approach that is risk based, mindful of resources, protective of the environment and responsive to stakeholders.

To obtain a copy of the final Top-to-Bottom report, please call 1-800-249-8155 or view it at http://www.em.doe.gov/ttbr.html.

Experts in nuclear safety...

(Continued from page 6)

Another concern identified by the DNFSB relates to the issues associated with the development of new technologies for the stabilization of nuclear materials remains unchanged since 1999. While the Environmental Impact Statement (EIS) and Record of Decision (ROD) have identified the Melt and Dilute technology as the preferred alternatives for treating most of the aluminum based spent nuclear fuel, the project is not currently funded. The DNFSB supports utilizing existing facility capabilities (i.e., H-Canyon) to stabilize spent nuclear fuel while other disposition options are developed.

The DNFSB is also watching with interest the approach SRS is proposing in regards to the Cleanup Reform Appropriations. In support of material stabilization activities, numerous missions are targeted for H Area. This fact coupled with an accelerated schedule under the Cleanup Reform Appropriations, requires careful management of vital projects. Davis said the DNFSB has expressed an interest in seeing an integration plan as soon as possible.

For additional information check out these web sites: www.dnfsb.gov or www.deprep.org

Ken Goad, NM Committee Chair, expressed his value for the presentations by saying, "We appreciate having the DNFSB speak to us. We really benefit from their technical expertise and independent viewpoint. We will continue to seek their help as we evaluate DOE plans for SRS nuclear materials."

Responsibilities of the Defense Nuclear Facilities Safety Board (DNFSB)

Broadly speaking, the DNFSB is responsible for independent oversight of all activities affecting nuclear safety within the DOE nuclear complex. Congress gave the DNFSB a variety of powers to achieve its mission. Primary among these is the power to issue a recommendation to the Secretary of Energy. Although the Secretary is permitted to reject DNFSB recommendations, in practice the Secretary has not chosen to do so since the inception of DNFSB operations.

The DNFSB reviews and evaluates the content and implementation of DOE health and safety standards applicable to the design, construction, operation, and decommissioning of defense nuclear facilities. The DNFSB recommends to the Secretary of Energy any specific measures, such as changes in the content and implementation of those standards, that the DNFSB believes should be adopted to ensure that the public health and safety are adequately protected. The DNFSB also reviews the design of new defense nuclear facilities before construction begins, as well as modifications to older facilities, and recommends changes necessary to protect health and safety. Review and advisory responsibilities of the DNFSB continue throughout the full life cycle of facilities, including shutdown and decommissioning phases.

In addition to recommendations, the DNFSB may conduct investigations, issue subpoenas, hold public hearings, gather information, conduct studies, and establish reporting requirements for DOE. The DNFSB is required by statute to report to Congress each year concerning its oversight activities, its recommendations to the Secretary of Energy, and improvements in safety achieved at defense nuclear facilities as a result of its activities.

DOE-SR makes decision on the Consolidated Incineration Facility

On March 15, 2002, Westinghouse Savannah River Company (WSRC) issued the PUREX Solvent Waste Alternative Treatment Final Report and a recommendation to pursue PUREX waste alternative treatment and initiate closure of the Consolidated Incineration Facility (CIF) upon demonstration of the treatment option (defined as treating 10 percent of the organic PUREX).

On April 1, 2002, SRS notified the South Carolina Department of Health and Environmental Control that a decision was made to accept the WSRC recommendation. In accordance with the SRS Resource Conservation Recovery Act Part B Permit, DOE-SR had until April 1, 2002 to make the decision to either restart CIF or pursue an alternative treatment option.

In a letter to the CIF Focus Group, DOE-SR Program Manager Ray Hannah said, "We very much appreciate the contributions of the CIF Focus Group and of everyone whose hard work has helped to form the basis of our decision."

With the news that SRS will pursue an alternative treatment option, the CIF Focus Group is planning to extend its charter for one more year to follow the research and development of the treatment, storage and disposal process for SRS's legacy PUREX waste.

Is your organization looking for interesting speakers?

Members of the SRS CAB are available to provide

- *A brief history of SRS*
- *A description of the various environmental management programs*
- *Information about how the public can get more involved in important cleanup decisions.*

Call 1-800-249-8155 for more information

SAVANNAH RIVER SITE CITIZENS ADVISORY BOARD

Key criteria for Board membership includes a time commitment and the desire and ability to work towards better and informed recommendations.
To apply for membership to the Citizens Advisory Board, please call 1-800-249-8155.

"*Board Beat*" is published semiannually by the Savannah River Site Citizens Advisory Board. Content is provided by Board members and support staff. Please send your comments and suggestions to:

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Upcoming 2002 Board Meetings

May 21	Combined Committee	N. Augusta Com. Cntr, N. Augusta, SC
July 22-23	Quarterly Full Board	Adams Mark, Columbia, SC
August 27	Combined Committee	Holiday Inn, Beaufort, SC
October 21-22	Quarterly Full Board	Radisson, Charleston, SC
November 12	Combined Committee	Aiken Municipal Conf. Cntr, Aiken, SC

NOTE: Individual committee meetings will be held as required.

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